

EXPRESS EL 97102128465  
PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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14. Nov. 2005	
Sv 15.11. 16	
THOMSON Hannover Patent Department	

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Applicant's or agent's file reference PF030176 ✓		Date of mailing (day/month/year) 10.11.2005 <i>EPER ✓sh</i>	
International application No. PCT/EP2004/053098	International filing date (day/month/year) 25.11.2004	Priority date (day/month/year) 28.11.2003	
Applicant THOMSON LICENSING S.A. ET AL.			

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

BEST AVAILABLE COPY

Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Mamassian, L Tel. +31 70 340-1932
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference PF030176	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2004/053098	International filing date (day/month/year) 25.11.2004	Priority date (day/month/year) 28.11.2003
International Patent Classification (IPC) or both national classification and IPC G11B7/13, H01L31/0203		
Applicant THOMSON LICENSING S.A. ET AL.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>
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Date of submission of the demand 16.09.2005	Date of completion of this report 10.11.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Pacholec, D Telephone No. +31 70 340-4530



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INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/EP2004/053098

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-7 as originally filed

Claims, Numbers

1-6 as amended (together with any statement) under Art. 19 PCT

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP2004/053098**

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-6
	No: Claims	
Inventive step (IS)	Yes: Claims	1-6
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP2004/053098

**Re Item V****Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following document:  
D1: US-A-5 811 799 (WU ET AL) 22 September 1998 (1998-09-22)
  
2. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):  
Method of producing a photoelectric transducer, having the steps of:  
-providing a spacer (30) with a recess in a rigid material;  
-mounting the spacer (30) on board (10) bearing at least an optical sensor (50) in such a way that the optical sensor (50) is located in the recess;  
-filling at least part of the recess with an optical glue, and  
-hardening the optical glue,
  
3. The subject-matter of claim 1 differs from this known D1 in that the width of the recess is such large that after hardening the surface of the optical glue is plane at least above the optical sensor (50). It is therefore not disclosed in the available prior art nor obvious for these skilled in the art.
  
4. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
  
5. The problem to be solved by the present invention may be regarded as how to simplify manufacturing of the transducer for the optical pick up device.
  
6. Claim 2 is the device claim related to claim 1 and it is also new (Article 33(2) PCT).
  
7. Claim 3 comprises all the features of claim 2 and should have been therefore formulated as a claim dependent on the latter (Rule 6.4 PCT).
  
8. Claims 3-6 are dependent on claim 2 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP2004/053098

**Claims**

1. Method of producing a photoelectric transducer, having the steps of:

5 - providing a spacer (7) with a recess in a rigid material;

- mounting the spacer (7) on a board (8) bearing at least an optical sensor (9) in such a way that the optical sensor (9) is located in the recess;

10 - filling at least part of the recess with an optical glue (11), and

- hardening the optical glue (11),  
**wherein the width of the recess is such large that after hardening the surface of the optical glue (11) is plane**

15 at least above the optical sensor (9).

2. Photoelectric transducer, including a spacer (7) with a recess in a rigid material, the spacer (7) being mounted on a board (8) bearing at least an optical sensor

20 (9) in such a way that the optical sensor (9) is located in the recess, at least part of the recess being filled with an optical glue (11), **characterized** in that the width of the recess is such large that the surface of the hardened optical glue (11) is plane at least above the

25 optical sensor (9)

3. Optical pick up suitable for reading an optical disc, **comprising:**

- a photoelectric transducer according to claim 2, and

30 - an optical body (1) with means for transmitting at least one light ray to the optical sensor (9) through the

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optical glue (11), the spacer (7) of the photoelectric transducer being fastened to the optical body (1).

4. Optical pick up according to claim 3, **characterized in** that the wall (14) of the spacer (7) defining the recess is perpendicular to the board (8).

5. Optical pick up according to claim 4, **characterized in** that it uses at least two light rays, and at least two optical sensors (9a, 9b) on the board (8) each designed to receive one light ray, the spacing (E3) between the centers of the optical sensors being the same as the spacing (F3) between the corresponding light rays (R1 and R2) at the surface of the optical glue (11).

15 6. Optical pick up according to one of claims 3 to 5, **characterized in** that the spacer (7) and the optical body (1) are produced in the same material.